

Wave Packet

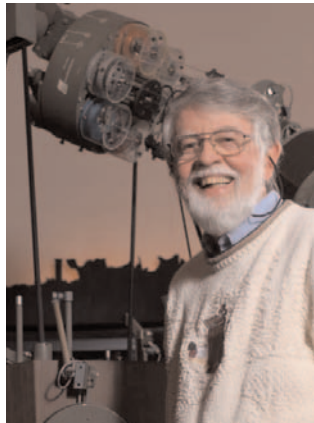
(wav pāk'it) *n.* a bundle of information sent out by one object to another

Welcome to *Wave Packet*, the inaugural newsletter of the Department of Physics, Astronomy and Geosciences, written especially for our alumni, students, faculty, staff and friends. Inside you'll read about your former professors (and their latest research projects), revisit Smith Hall, meet some current students, and find out what's new in the department.

We've also included a list of alumni, dating from 1929. Our graduates are a great source of pride for all in our department, and we want to keep in touch. We'd like to maintain a relationship with everyone who has passed through our doorways. We hope this newsletter will help us reconnect with you. Look for *Wave Packet* once a year in the late summer, and other news from us right after the New Year.

Elmer Kreisel and Mary Lu Larsen to Retire

It's hard to believe that two of the most popular faculty members in our department – Elmer Kreisel and Mary Lu Larsen – will retire this academic year. Elmer Kreisel has served our department for 37 years. Whenever anyone thinks of astronomy at TU, they immediately think of Elmer. A conservative estimate is that he has taught more than 10,000 students during his tenure at TU. He plans to retire in December, at the end of the fall 2004 semester. His enthusiasm and infectious smile will surely be missed. If you are interested in sending him a message wishing him well, e-mail him at ekreisel@towson.edu.



Elmer Kreisel



Mary Lu Larsen began her career at TU in 1974. Her warm personality and care for her students have been reflected in her teaching, making her a student favorite for more than 30 years. An expert in particle physics, she has taught a wide array of majors and GenEd courses. She plans to retire in May, after the spring 2005 semester. You can reach her at mlarsen@towson.edu if you'd like to send a "goodbye" e-mail.

Mary Lu Larsen

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Plans are under way for retirement dinners for Mary Lu Larsen and Elmer Kreisel. If you are interested in attending one or both, please contact department chair-person David Vanko at dvanko@towson.edu or call 410-704-3020.



Greetings from the Chair



Dear Friends,

I am very happy to have the opportunity to introduce this first in a series of Physics, Astronomy and Geosciences newsletters, being distributed to alumni, students, faculty, staff and friends of the department. Thanks are due to the faculty and staff for putting the newsletter together, especially Dr. David Schaefer.

Whether you are a current student or a graduate of the department from many years ago, we hope that the newsletter will provide useful information and insight about the people and the programs that make our department such a great place.

One reason that we wish to reconnect with alumni, and keep connected with our current students after they graduate, is to facilitate our new efforts to conduct periodic assessments of our programs. How are students doing when they leave? What in their Towson experience was most useful many years down the road? To answer questions like these, we will send questionnaires from time to time seeking your input.

The other major reason to reconnect is to build a base of support for the department and its programs. We would love to have the resources to establish scholarships, equip teaching and research labs, and improve the department's environment in other ways. Consequently, we ask for your support when you are developing your personal charitable giving plans. As an example, we are currently receiving donations in memory of Dr. William F. Pelham, who passed away recently. We hope to establish an endowed scholarship in his name. Please consider a gift to the TU Foundation – William F. Pelham Memorial Fund this year.

I hope you enjoy the *Wave Packet* newsletter, and that we will hear from you soon.

Sincerely,
David A. Vanko
Professor of Geology and Department Chairperson

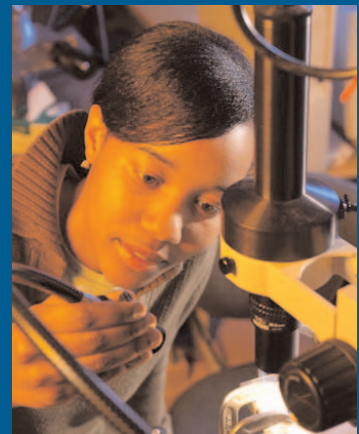
ALUMNI QUIZ

1. In what year did the department graduate its first major?
2. What was the tuition that year?
3. Which year produced the most graduates in our department?

See page 9 for answers.

What's New at Smith Hall? *Find out at our spring Open House*

If you were to walk down the hallway on the fourth floor of Smith Hall, it would probably look very similar to when you were a student – from the outside. If, however, you open some of the doors you will see remarkable changes. The Department of Physics, Astronomy and Geosciences in recent years has developed several integrated, state-of-the-art laboratories used to perform research in areas from astrophysics to thin film materials to fluid inclusions. (See page 10 to learn more). The department will host an Open House in the spring of 2005 to showcase these exciting, new facilities. Look for an announcement and more news about this event!



Faculty News

The department continues to grow in its programs, facilities and faculty. Recent retirements and new programs have created many changes in the department personnel. Like a good ball club, the department now contains an exciting blend of seasoned veterans, mid-career faculty and energetic rookies. We hope you'll enjoy the following faculty profiles.

Interesting Stats		
Astronomy Faculty2	Total Faculty17	Full Professors7
Geology Faculty4	Male Faculty12	Associate Professors4
Physics Faculty8	Female Faculty5	Assistant Professors.....6
Science Education Faculty3		

Harry Bates Professor

Probably best known for his work in optics and for teaching the course Light and Color, Harry Bates has expanded his interests to the area of astronomy. He is currently engaged in research at Johns Hopkins performing occultation experiments – watching as one celestial body moves in front of another to determine the characteristics of the objects. He and his collaborators have received funding for this work and are looking to publish soon. In conjunction with this research, he has also begun teaching some astronomy courses. He is among a number of physicists who are teaching courses for the new astrophysics track in the physics major.



workshop, “Teaching Structural Geology in the 21st Century,” held at Smith College, Mass. She also maintains her research on the tectonic history of southeastern New England and the Maryland Piedmont, where she supervises a number of senior projects.

Henry Chen Professor

Henry Chen continues to teach a full complement of courses, both in the lower and upper divisions. He has been teaching the algebra-based General Physics course for some time, but is anxious to get back to the calculus-based courses again. He recently took a year sabbatical and did some work at the Thomas Jefferson National Accelerator Facility in Newport News, Va.



Rachel Burks Professor

Rachel Burks continues to teach Structural Geology and Physical Geology regularly. Several years ago she began teaching the History of Science – one of Towson’s Advanced Composition courses – every semester. From this experience has come her newest research interest, the life of African-American scientist Benjamin Banneker. She now gives presentations on Banneker locally and across the country. This work has also led her back to her first academic love, archaeology. Last summer she learned to use ground-penetrating radar at a geophysical archaeology course given by the National Park Service at Spiro Mounds, Okla., in hopes of using it to locate the now-unmarked graves of Banneker and his family. Later in the summer she attended an NSF-sponsored “On the Cutting Edge”



Jon Filer Associate Professor

“As far as life at school, my biggest news is becoming tenured and an associate professor this year. So I guess I’ll start unpacking. Steve Lev and I have started a three-year project funded by the American Chemical Society – Petroleum Research Fund on the provenance of Upper Devonian strata in the Appalachian basin. One of the nice things about that is having summer student interns – no more fetching my own coffee and carrying rocks (just kidding). Lisa, Avery and Aidan are doing great. Avery’s in fourth grade now and Aidan just started first. Lisa works now at their school teaching pre-kindergarten, first-, fourth- and fifth-grade science. This year she has both boys in class, so I



(continued on next page)

Faculty News *(continued)*

guess they'll have to call her Ms. Mom. We spent three weeks camping in Utah this summer. Go there if you can – good geology (the best kind, mostly sedimentary), good scenery and good beer. Come see us and if you find an oil field, send us ... a Christmas card!"

Tom Krause

Associate Professor

Tom Krause has been busy teaching the calculus-based General Physics course. He has worked on updating some of the laboratory experiments and implementing new teaching pedagogies. He continues to teach a variety of upper-division courses, including a relatively new course called How Things Work. A new interest in astrophysics has led him to teach some of the astronomy courses.



Elmer Kreisel

Assistant Professor

Elmer Kreisel will retire from Towson in December 2004. He plans to do a lot of traveling after retirement, but we still hope to get him to host planetarium or telescope observation shows. He currently is teaching (what else?) General Astronomy, where he has made several additions to the laboratory over the past few years.



Mary Lu Larsen

Professor

Mary Lu Larsen will retire from Towson in summer 2005. Currently she remains active in her course work, teaching calculus-based General Physics, Math Physics and Thermodynamics. Like several other faculty in the department, she has become interested in astrophysics and recently taught a Particle Astrophysics course.



Steven Lev

Assistant Professor

Steve Lev, the newest addition to our geology faculty, teaches a variety of classes for the geology and environmental science majors. He is in charge of the department's Inductively Coupled Plasma Mass Spectrometer



(ICPMS) and Thermal Ionization Mass Spectrometer (TIMS). His research involves detection and identification of trace elements and isotope geochemistry in black shales, soils and sediments. He has also been collaborating with faculty in physics and biology to use the ICPMS for detection and identification of biological organisms. This work has a direct application in the area of homeland security.

Laura Lising

Assistant Professor

Laura Lising joined the faculty in fall 2003. She did her doctoral work in low-energy particle/nuclear physics, measuring neutron decay parameters to look for violations in the symmetry of physical laws with respect to time reversal. After this she did a post-doctoral fellowship in atomic physics, working on laser cooling for earth- and space-borne atomic clocks. Soon after, she discovered her passion – science education research, which led to a post-doc with the Physics Education Research Group at the University of Maryland. At Towson, she is continuing her research in student learning and teaching and enjoying implementing the results in her courses for pre-service elementary teachers. She and Cody Sandifer also have a grant from the Physics Teacher Education Coalition to improve the science education courses at Towson, especially in the area of inquiry methodology.



Eddie Loh

Professor

Eddie Loh, who served as department chair for about 20 years, has rejoined the ranks of the regular faculty. A course he initiated at Towson called How Things Work has become one of the favorite General Education courses on campus. He has also been very interested in developing distance learning courses for the department. He took some time off last summer to visit China.



Rajeswari Kolagani

Assistant Professor

Rajeswari Kolagani, formerly M. Raj Rajeswari, joined the department in August 2001. Her research interests are in materials physics – specifically in the area of perovskite metal oxide thin films. Perovskite metal oxides represent a family of functional



materials including high-temperature superconductors, ferroelectric and magnetic materials that are expected to play key roles in several emerging technologies. She currently runs Towson University's Thin Film Laboratory with facilities for Pulsed Laser Deposition (PLD) and electrical and magneto-transport measurements. A state-of-the-art X-ray diffractometer will be added to the materials research facilities by the end of 2004.

She also serves as faculty adviser to the Society of Physics Students (SPS) and coordinator for our chapter of Sigma Pi Sigma. If you are interested in SPS or Sigma Pi Sigma, or if you wish to join us at our annual Sigma Pi Sigma induction ceremony in May 2005, please contact Raj Kolagani at rrajeweswari@towson.edu. Details will be posted on the department Web site and in future newsletters.

Cody Sandifer *Assistant Professor*

Cody Sandifer came to the department in 2001 after obtaining a Ph.D. in science education from San Diego State University and a master's in physics from Purdue University. He and Laura Lising recently received a three-year, \$300,000 grant from the Physics Teacher Education Coalition (Phys-TEC) to improve the science component of the elementary and early childhood programs at Towson. In addition, he trains middle school teachers in Howard County and Washington, D.C., to implement the Constructing Ideas in Physical Science (CIPS) curriculum. His research is focused on the factors that support or hinder inquiry-based science teaching, collaborative discussion of science concepts, and informal science education.



David Schaefer *Associate Professor*

Many of you may remember Dave from his days as an undergraduate at TU. (That's "Dr. Dave" now, doing his best Welcome Back, Kotter imitation). After receiving his Ph.D. from Purdue University, he did a short post-doc at the Naval Research Laboratory before joining the TU faculty in 1995. He received tenure in 2000. He started and currently runs the department's Nanotechnology Laboratory where he and his students use two research-grade Scanning Probe Microscopes to study the structure and interactions of materials on the nanometer length scale. While many of his experiments deal with making quantitative force and adhesion measurements, he has been deeply involved in research on biological objects in the past few years. He has



also begun work on implementing a new teaching method called "Workshop Physics" into the General Physics curriculum. He also recently initiated an Honors Physics course.

Vera Smolyaninova *Assistant Professor*

Vera Smolyaninova is the newest physicist in the department. Originally from Russia, she received her Ph.D. at the University of Maryland, College Park before coming to TU. She teaches the algebra-based General Physics courses and Quantum Mechanics. She is very active in research. She specializes in studying properties of new magnetic and superconducting materials and is interested in the development of nanometer-sized magnetic field sensors. She recently received an NSF Career Award to perform her research. This is the first award of this kind given to any faculty member at Towson.



Alex Storrs *Associate Professor*

Alex Storrs joined the faculty in fall 2000 after working at the Space Telescope Science Institute for nine years. His research interests include high-resolution images of asteroids (he recently discovered a companion to asteroid 107 Camilla) as well as comets and other small bodies in the solar system. He established the Astronomy and Astrophysics Computation Center in Smith Hall with six SunRay workstations running UNIX and most of the research software applications. Seven undergraduates have used or are using this equipment for a variety of projects, and five of these have presented their results at various national and international astronomy meetings. He has developed several courses, including Cosmic Origins, the Physics of Sound and Music and Astrophysical Techniques. He was recently awarded the Honors College Teacher of the Year prize. He also coordinates the department's monthly planetarium shows.



Leon Ukens *Professor*

"I am currently a Faculty Fellow for the NSF-funded Vertically Integrated Partnership project involving the Montgomery County Public Schools and the University System of



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Faculty News *(continued)*

Maryland. This project is aimed at increasing the inquiry nature of science offerings at the pre-college and college levels. I am co-authoring a K-6 elementary science textbook series for the Scott Foresman Publishing Co., scheduled to be available to schools in 2005. I had an article, "Powerful Ideas in Physical Science," published in the July/August 2004 issue of the *Journal of College Science Teaching*. This past year I was the recipient of the Sloan Teaching Award from Towson University. I continue to teach courses aimed at the pre-service elementary and early childhood education majors."

David Vanko

Professor

"I've just finished three years at Towson University, after being hired as the department's chairperson in the fall semester of 2001. I'm a native Baltimorean, born at Johns



Hopkins Hospital, raised in Loch Raven Village and Timonium, and graduated from Dulaney High School. I attended Johns Hopkins University (lived at home, and the tuition was, as I recall, less than \$2,000). At Hopkins I gravitated toward the major in earth and planetary sciences. With interests in sedimentary geology and geochemistry, I headed to Northwestern University for graduate school, where my studies turned toward igneous petrology and hydrothermal geochemistry.

My research has focused on deep-sea hydrothermal processes. My approach involves rock and mineral chemical studies with an emphasis on the analysis of fluid inclusions. My work has taken me on research cruises to the eastern Pacific off Central America, the Northeast Pacific off Washington-British Columbia, and the Southwest Pacific off Papua New Guinea."

Staff Updates

Kim Anderson

Kim Anderson has worked part-time as a secretary in the department since April 1996. She and her husband have been married for 35 years and have two grown children, one a TU graduate and the other a UMBC graduate. Her interests include gardening and boating and she especially enjoys a good cup of coffee to start the day.



Mark Edmonston

Mark Edmonston is the department's lab manager. In addition to managing all computer and network issues, he helps design laboratories and demonstrations. He also teaches a class or two each year. He was awarded the Outstanding Staff Person of the Year for the college in 2003.



Harold Asbury

Harold Asbury has been a member of the department for more than 20 years. He maintains the stock rooms and helps out with all laboratory and demonstration equipment.



Jeff Klupt

Jeff Klupt is key to keeping the department functioning smoothly. He not only handles the electronics needs of our department, but also serves the needs of the entire college. Always ready to lend a helping hand, he received the Outstanding Staff Person of the Year Award for the college in 1999.



Diane David

Diane David, the department's office manager for the past 11 years, joined the staff of then-Towson State College in 1971. She worked at Cook Library and the Department of Health Science until 1978. After a 15-year "vacation" to raise two sons, she returned to Towson in 1993.



Mark Scarinzi

Mark Scarinzi is operations manager and the "Radar O'Riley" of the department. He keeps it running by doing the background work – keeping track of the budget, serving as building manager, and helping out in whatever capacity is needed. He received the Outstanding Staff Person of the Year Award for the college in 1998.



About Our Adjunct Faculty

Approximately 40 percent of the course instruction in the Department of Physics, Astronomy and Geosciences is delivered with the help of adjunct faculty members. These hard working and dedicated faculty members are crucial to the success of our academic programs. Following are short biographies for several of our adjunct faculty.

Ann G. Craig (B.S., Coppin State; M.S., Johns Hopkins) Recently retired after 33 years with the Baltimore City Public Schools, Ann Craig has worked as an academic coach in math and science. She currently teaches two sections of SCIE 376 Teaching Science in the Elementary School.

Deitre L. Epps (B.S. in microbiology, Howard University; M.S. in human services administration, Coppin State University) Deitre Epps has served as a teacher, a center director and science coordinator for a private school in Baltimore City for more than 13 years. She teaches SCIE 371 Teaching Science in Early Childhood at Towson.

Matthew Ferrari (B.S. in geology, University of Pennsylvania; M.S. in engineering geology, Drexel University) A hydrologist with the U.S. Geological Survey since 1991, Matthew Ferrari has worked on projects dealing with ground water quality and anthropogenic effects of land use. He teaches the evening GEOL 121 Introductory Physical Geology class at Towson.

Bill Gawne (B.S. and M.S. in physics, University of North Texas) Bill Gawne is currently involved in a long-term architecture study of the communication, command and control system for the GOES-R series of weather satellites. At Towson he teaches PHYS 131 Light and Color and ASTR 161 General Astronomy.

John Grimes (B.S. in physics and mathematics, Johns Hopkins; M.S. in physics, University of Chicago) Originally from Ottawa, Canada, John Grimes' primary research interests are X-ray and UV studies of star-forming galaxies. He is also interested in studying methods to teach and excite students of all ages about current science topics. He teaches the evening PHSC 101 Physical Science class.

Owen "Yits" Litt (Ph.D., Texas A&M) Owen Litt joined the faculty of the Department of Physics, Astronomy and Geosciences in September 1998. He has taught classes in General Physics, Electricity and Magnetism, Math Physics and Astronomy, as well as math classes in the Department of Mathematics. He has served as a First Year Experience adviser for freshmen, and currently teaches the evening calculus-based General Physics course.

Martha T. Martin (B.S. in biology, M.A. in liberal arts, Towson University) Bringing experience in early childhood and science education from Baltimore County Schools, Martha Martin is currently teaching SCIE 371 Teaching Science in Early Childhood. She has invited more than 30 home schooled children to participate in monthly Science Days with students in the SCIE 371 class. She is excited to provide her students with this practical experience.

Bonnie Souter (B.S. and M.S. in geology, University of California, Davis; Ph.D. in geophysics, MIT) Originally from California, Bonnie Souter has lived in Boston, Oxford, and now Baltimore. She enjoys hiking, biking and spending time with her family. She is a research associate with Bruce Marsh at Johns Hopkins, and is currently teaching labs for GEOL 121 Physical Geology at TU.

Walter Thompson (B.S. in physics, University of Texas; M.S. in astrophysics, Johns Hopkins) While at Johns Hopkins, Walter Thompson worked at the Space Telescope Science Institute on large-scale structure formation and the evolution of early-type galaxies. He currently teaches Introductory Astronomy and General Physics at TU.

Lisa Tirocchi, a fourth-grade elementary school teacher at Johnnycake Elementary in Baltimore County, is a Teacher In Residence (TIR) at Towson University this year. She is working with TU professors Laura Lising and Cody Sandifer to improve the SCIE 376 Science Methods course taught to elementary education majors. The TIR program is funded through a PhysTEC grant.

Wayne H. Warren, Jr. (B.A. in physics, Fairleigh Dickinson University; M.A. and Ph.D. in astronomy, Indiana University) Wayne Warren is working on a funded project with TU physics professor Harry Bates to make video observations of occultations of stars by the moon and asteroids. In addition to teaching PHYS 131 Light and Color at TU, he also teaches astronomy at University of Maryland University College.

Grace Yong (B.S. in chemistry, University of California, Berkeley; Ph.D. in physics, Wayne State) Grace Yong has taught a lab for PHYS 202 General Physics for Health Sciences, and is currently teaching PHSC 101 Physical Science.

Retired Faculty – Where are They Now?

Robert Johnson

Robert Johnson continues to teach one section of PHSC 303 Earth-Space Science each semester. He, his son, Thor, and his future daughter-in-law, Mona, attended a recent planetarium presentation and telescope viewing at TU.

John Wessner

“I work about 50 hours a week installing furnaces and an occasional AC for the two local Habitat for Humanity chapters. I follow Carol to meetings occasionally, and we recently spent two weeks in Kenya. I pretty much do what I always did, save I only connect to Towson six Saturdays a year (for an honors class that does Habitat work).”

Jacob Huang

Jacob Huang retired in May 2001 after working in the department for 30 years. He recently sent this e-mail: “Since retiring I have gone to Germany three times for missionary work among the Chinese students. I plan to continue working there next year for four months. I have translated the *Historical Survey of the Old Testament* by Mirrill and I am halfway into translating *The Tent of His Splendor* by Flack. Caroline and I traveled to New Zealand for three weeks. The land is beautiful and it’s worth going.”

David Greene

David Greene retired after teaching at Towson for 26 years. He was the Green Party candidate in the Baltimore City Council's 4th District race this year. He is active in several Quaker organizations, and teaches ballroom dancing classes. An activist for human-rights causes, he helps feed the homeless every Monday outside City Hall.

Lori Molitor

Lori Molitor writes that she is happily living the good life in Cedaredge, Colo., a tiny hamlet in the shadow of Grand Mesa on the western slope of the Rockies. She is very active politically, raising awareness and challenging both industry and state officials to limit the environmental impact of recent coal-gas drilling activities on Grand Mesa. She also finds time to raise and ride horses, and participate in gourmet cooking groups and book clubs.

Robert Johnson



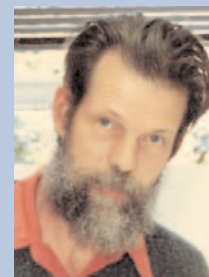
John Wessner



Jacob Huang



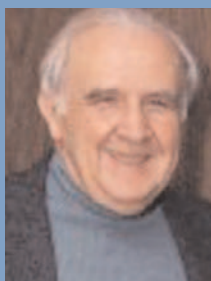
David Greene



Lori Molitor



IN MEMORIAM



John Newman, professor emeritus of physics, died of a heart attack in November 2004. He had been living in the Chicago area for the past 10 years, following his retirement from the department. Donations in lieu of flowers may be sent to: Friends Committee on National Legislation, 245 Second St., N.W., Washington, D.C. 20002.

Student News and Announcements

TU Students Invade Capitol Hill

Towson University physics majors have been selected twice in recent years to display their research for the Council on Undergraduate Research's "Posters on the Hill" event. Josh Robinson was selected in 1999 and Michael Buck was chosen in 2003. The annual event showcases 60 competitively selected student posters, on display on the U.S.

Capitol during an afternoon reception. The event also includes an orientation session, followed by visits from students and their faculty mentors to their representatives' and senators' offices. Josh Robinson is pictured above, center, with then-Rep. Robert L. Ehrlich, right, and physics professor David Schaefer, left.



CLUB NEWS

Some 20 to 25 students are active in the Society of Physics Students, a club supported by the Department of Physics, Astronomy and Geosciences. The club's activities include field trips to Goddard Space Flight Center, the National Institute of Standards and Technology (NIST) and the Johns Hopkins Applied Physics Lab.

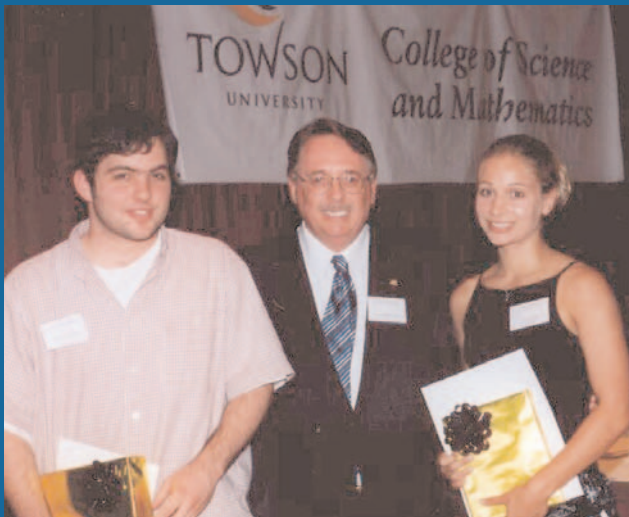
The club officers are listed below:

<i>President</i>	Robert Kennedy
<i>Vice President</i>	Andrew Terzi
<i>Treasurer</i>	Sarah Bank
<i>Secretary</i>	Laura Stemler



TU students on one of the many geology field trips to Western Maryland.

Students Honored at CSM Convocation

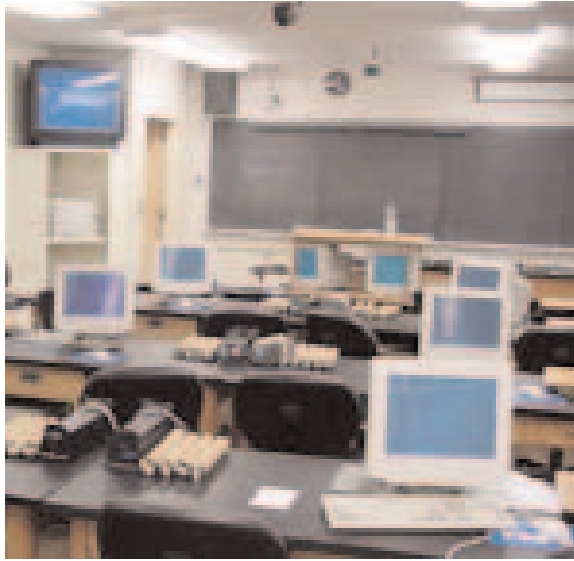


Students in the Department of Physics, Astronomy and Geosciences have received numerous departmental, college and university awards in recent years. Matthew Benicewicz and Erin Hoalcraft, pictured above with the College of Science and Mathematics Dean Gerald Intemann, received the Rubendall Award for Outstanding Senior. Erin Hoalcraft also received the Hoke L. Smith Scholarship Endowment Award as well as the Jess Fisher award. Congratulations to all awardees!

QUIZ ANSWERS:

1. 1970 (Before 1970, we weren't officially a department.)
2. In 1970, tuition was \$100/semester for Maryland residents and \$225/semester for out-of-state students. (In contrast, 2004-05 tuition and fees are \$3,336/semester for Maryland residents and \$7,676 for out-of-state students.)
3. 1996

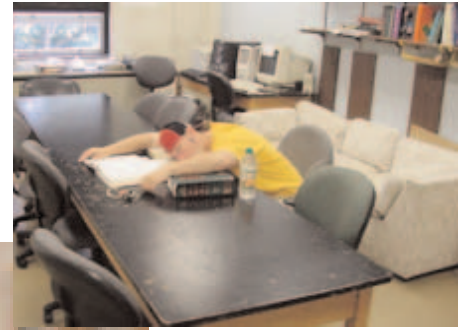
Virtual Tour of the Department of Physics, Astronomy a



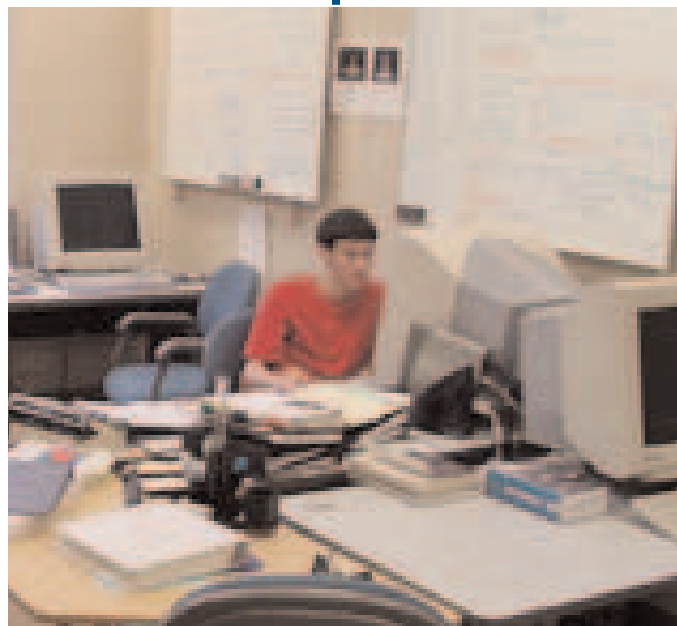
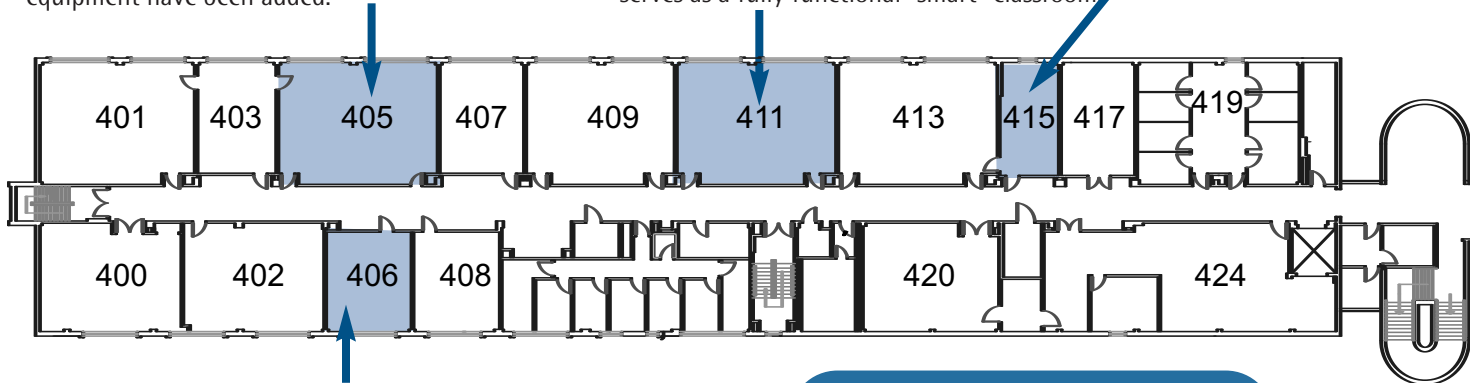
Room 405: You may have taken the course Light and Color here. New computers and audio visual equipment have been added.



Room 411: The new calculus-based General Physics room. Through an NSF grant and support from the college, this room now serves as a fully functional "smart" classroom.



Room 415: The Student Lounge, home of the Society of Physics Students.



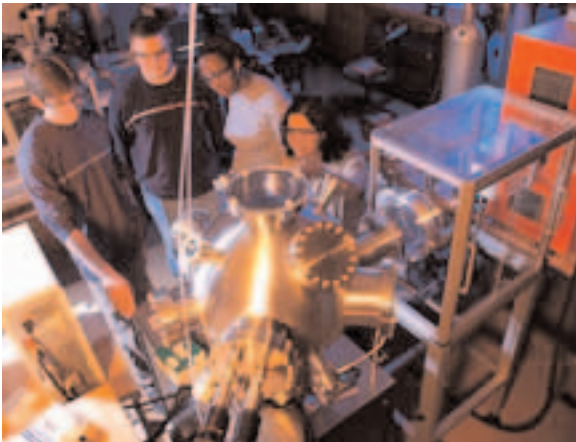
Room 406: The Astrophysics Laboratory, used for astrophysics research, has several Unix-based computer systems.

See the tour online:
wwwnew.towson.edu/physics



Room 448: The Nanotechnology Laboratory is located here. Funded by two NSF grants, work in this lab centers around using Scanning Probe Microscopy to study materials and objects on the nanoscale.

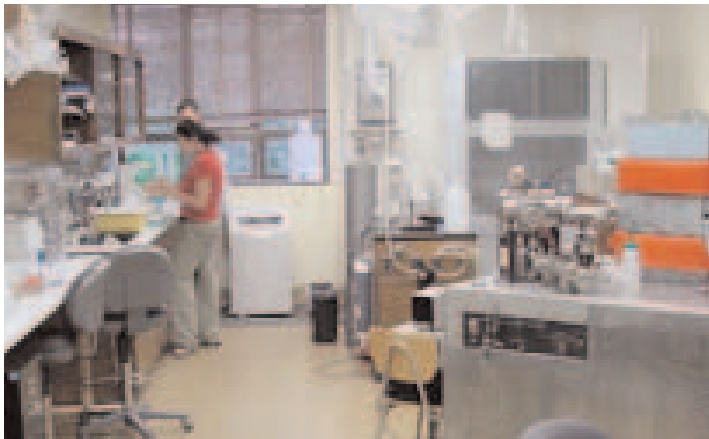
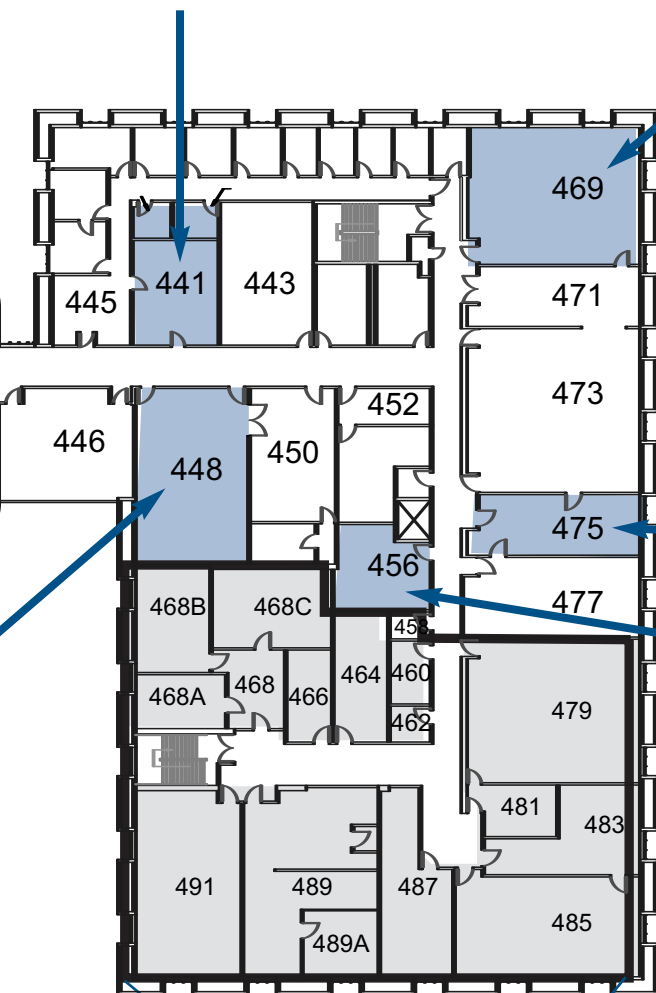
Earth and Geosciences – Smith Hall, Fourth Floor



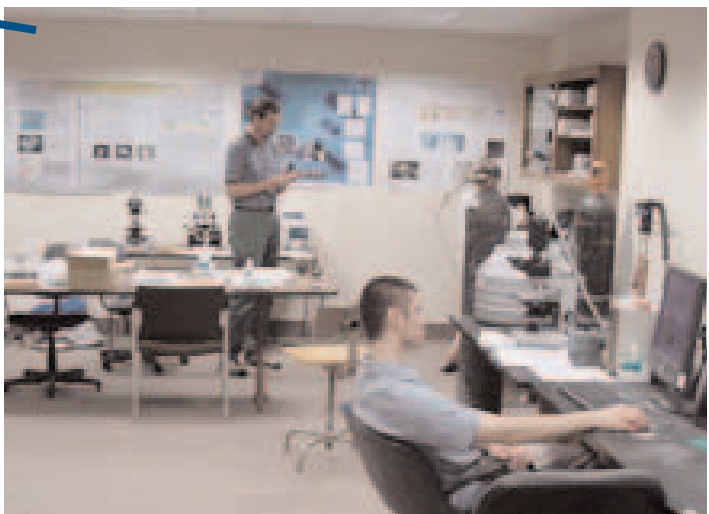
Room 441: The Materials Research Lab, funded by the NSF, has state-of-the-art equipment such as a PLD.



Room 469: Many of you remember this as the Intermediate Lab room. It now serves as a classroom for geology courses.



Room 475: The TU Geochemistry Laboratory contains a Class 1000 clean room and a Thermal Ionization Mass Spectrometer (TIMS).



Room 456: Remember the Physics Lounge? It is now a laboratory with special optical microscopy used to study fluid inclusions.

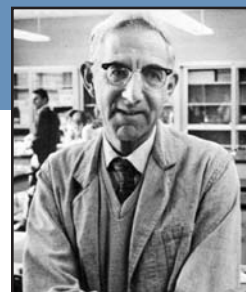


Students Honored with the Rubendall, Pelham Awards

The Edward I. Rubendall Award is granted to outstanding juniors and seniors in the physics major. The William F. Pelham Award recognizes outstanding achievement among physics juniors. The following students have received these awards.

Edward I. Rubendall Award Winners

Dr. Edward I. Rubendall



Outstanding Junior Physics Major

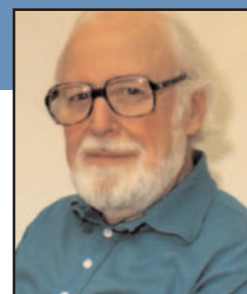
1978	Keith D. Requard	1999	Matthew L. Reames
1979	Stephan L. Hastings	2000	Joshua Robinson
1980	Jeanette D. Adams	2001	Jeremy Robinson
1981	Thomas K. Hemmick	2002	Khaldoun Makhoul
1982	John P. Vogel	2003	Paul Cunningham
1983	Joseph M. Hejl	2004	Mason Overby
1984	Michael B. Stanka		
1985	Douglas L. Hemmick		
1986	Raymond L. Culbertson		
1987	William A. Dunkerton		
1988	Zhaohui Ma		
1989	Zhaohui Ma		
1990	David C. Robles		
1991	David A. Dumler		
1992	Kevin Cox		
	Giuseppe Romeo		
1993	Guillemette Brouillat		
1994	Russell N. Felts		
1995	Charles N. Ciampaglio		
1996	William J. Farrell III		
1997	Jessica Kim-Ouijano		
1998	Jacob Millspaw		

Outstanding Senior Physics Major

1978	Allen W. Kozycki	1992	David Dumler
1979	Keith D. Requard		Diane Rodriguez
1980	Stephan T. Preziosi	1993	Giuseppe Romeo
1981	Jeanette D. Adams	1994	Douglas A. McNaught
1982	Thomas K. Hemmick	1995	Richard E. Burdette III
1983	Thomas K. Hemmick	1996	Charles N. Ciampaglio
1984	Joseph M. Hejl	1997	William J. Farrell III
1985	Michael B. Stanka	1998	Jessica Kim-Quijano
1986	Douglas L. Hemmick	1999	Jacob Millspaw
1987	Gregory T. Mooney	2000	Matthew L. Reames
1988	William A. Dunkerton	2001	Joshua Robinson
1989	William A. Dunkerton	2002	Jeremy T. Robinson
1990	Zhaohui Ma	2003	Khaldoun Makhoul
1991	David C. Robles	2004	Matthew Benicewicz
			Erin Hoalcraft

William F. Pelham Award Winners

Dr. William F. Pelham



1995	Lawrence A. Bolling	2001	Khaldoun Makhoul
1996	William J. Farrell III	2002	Patrick Morton
1997	Christina N. Horn	2003	Emily Neral
1998	Jennifer Yantorno	2004	Robert Kennedy
1999	David Christopher Cox		

Thanks for Your Support

We are grateful to the many individuals who have contributed to the Department of Physics, Astronomy and Geosciences through the Towson University Foundation. Due to your generosity, the department will continue to develop and improve its scholarship and awards program.

Three funds support scholarships and other department initiatives: the Physics Discretionary Fund, the Edward I. Rubendall Endowment and the William F. Pelham Memorial Fund. The Physics Discretionary Fund enhances each program in the department, including the areas of physics, astronomy, geosciences and science education. Typical expenditures might be for student awards, costs associated with hosting faculty applicants and guest speakers, and student travel to meetings. The Edward I. Rubendall Endowment supports the Edward I. Rubendall

Physics Achievement Award for outstanding juniors and seniors in the physics major. Plans are in place to establish the William F. Pelham Memorial Fund through the TU Foundation in memory of Professor William F. Pelham, who passed away earlier in 2004. Funds are currently being held until the accumulated balance reaches \$10,000, the minimum amount required for an endowed fund. Eventually, in addition to the annual William F. Pelham Award for Outstanding Junior in the department, we hope to have the resources to award a Pelham Scholarship.

The following list reflects those individuals whose contributions to the Department of Physics, Astronomy and Geosciences were received from September 2001 through November 2004.

Carmine Angone	Terrance Dymski	Karl G. Larew	Alan Ross
Genevieve Bahan	Karen A. Erdos	Marilynn M. Larew	Barbara M. Ross
Allene Burdette	Jonathan K. Filer	Jerry Leventhal	Marina Semenenko
Richard E. Burdette, III	Frances Finlay	Kathy Leventhal	Joan M. Sheppard
Phyllis J. Burke	C. Louis Frey	Doris K. Lidtke	Monica L. Sherer
Laura J. Caldwell	Patricia Frey	Vernon Lidtke	Florence S. Silverman
Marisol Camacho	Nancy Hammond	Eddie Loh	Albert E. Smith, III
Tom Capellini	Matthew J. Hand	Tracy E. Miller	Vera N. Smolyaninova
Mirry Hwang Capio	Martin Helrich	Steven C. Niles	Alex Storrs
Henry Chen	Ina Helrich	Ginny Pelham	Ronald R. Teather
Louis T. Cox	Peter S. P. Hui	Tom Pelham	Joseph R. B. Tubman
Diane David	Noland Izar	Raj Rajeswari	Stephanie D. Willis
The Family of Nancy Dougherty	Jenny Jochens	Doris S. Rief	
	Benjamin Kezmarsky	Carmen Robb	

Would You Like to Contribute?

If you would like to support the Department of Physics, Astronomy and Geosciences through any of the existing funds, you can do so by sending a check made payable to **Towson University Foundation, Inc.** to:

Towson University Foundation, Inc.
8000 York Road
Towson, MD 21252-0001

Please indicate the name of the fund to which you wish to contribute on your check.

- Physics Discretionary Fund
- Edward I. Rubendall Endowment
- William F. Pelham Memorial Fund

Gifts can also be made by VISA or MasterCard online at www.towson.edu/supportTU or by calling the university's Office of Development at 1-866-301-3375.

Your contribution will benefit Towson University and will be administered by the Towson University Foundation, Inc. Gifts to the Towson University Foundation qualify as charitable contributions to an IRC Section 501 (c) (3) public charity for federal income, estate and gift tax purposes.

Departmental News and Announcements

Sigma Pi Sigma

The Department of Physics, Astronomy and Geosciences recognizes outstanding students and faculty who have contributed to physics by inducting them as members of the Sigma Pi Sigma Honors Society. The annual event includes a banquet and ceremony held in the University Union. Over the past 29 years, the department has inducted 116 individuals. Pictured, left to right, are the most recent Sigma Pi Sigma inductees: Paul Cunningham, Matt Benicewicz, Rajeswari Kolagani, Vera Smolyaninova and Alex Storrs.



Faculty Promotions

The following faculty members received promotions this year:

Dr. Rachel Burks
to Full Professor

Dr. Jon Filer
to Associate Professor
with Tenure

Dr. Alex Storrs
to Associate Professor
with Tenure



Inspiring a New Generation of Scientists

Timed to coincide with the 100th anniversary of Einstein's miraculous year, the World Year of Physics will bring the excitement of physics to the public and inspire a new generation of scientists. Events will be hosted by societies, universities, museums, schools, community groups and individuals. General information is available online at <http://www.physics2005.org>.

Towson University's Department of Physics, Astronomy and Geosciences is making plans to participate in this special year's events. Check our Web site, wwwnew.towson.edu/physics, for more information.



Faculty Members Receive NSF Grants for Major Research Instrumentation

Faculty in the Department of Physics, Astronomy and Geosciences received two Major Research Instrumentation (MRI) grants from the National Science Foundation this past year. Steven Lev, Rajeswari Kolagani, David Schaefer, Vera Smolyaninova and David Vanko obtained funding for new X-Ray Diffractometer and X-Ray Fluorescence equipment. The MRI program provides equipment for research, with funds usually reserved for large Research 1 universities. In making these grants, the NSF

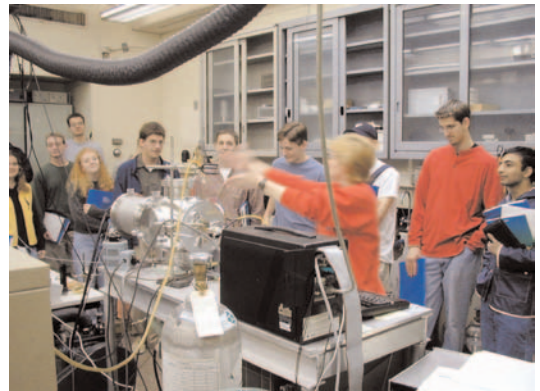
recognizes the high quality of research under way at Towson University.

These are the third and fourth MRI grants awarded to Towson University by the NSF. We obtained MRI grants in 1998 and 2001 to purchase a research grade Scanning Probe Microscope and to obtain equipment for the materials research facility. In all, the four grants total over \$1.3 million dollars.

Busy Year for Faculty

Teaching:

During the 2003-2004 academic year, a total of 3,420 students were enrolled in 138 scheduled sections in the Department of Physics, Astronomy and Geosciences. Students earned 10,894 semester credit hours over the course of the year. The lion's share of credit hour generation was in physics (46 percent), followed by science education (22 percent), geology (16 percent) and astronomy (16 percent). Sixty-five percent of the students served through classroom instruction (2,241 out of 3,420) were satisfying General Education requirements.



External Funding:

The department currently is involved in externally funded projects amounting to \$1.4 million. A majority of the full-time faculty (10 out of 15) is involved in, or has recently been involved in, externally funded research.

Publications:

Peer-reviewed journal articles are highly valued among scholarly products in the sciences. The department's full-time faculty published 15 peer-reviewed articles in 2003 and the first half of 2004 in the following journals:

J. Physics – Condensed Matter

J. Magnetism and Magnetic Materials

Astronomical Journal

Mineralium Deposita

Earth and Planetary Science Letters

Basin Research

Talanta

Chemical Geology

Geological Association of Canada

J. Volcanology and Geothermal Research

Geology

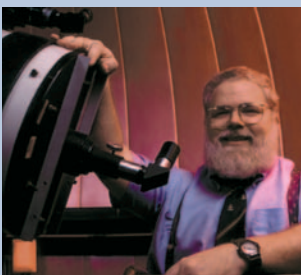
J. Geophysical Research

J. Geoscience Education

J. Research in Science Teaching

Another prevalent mode of disseminating research results is through published abstracts tied to oral or poster presentations at professional meetings. The full-time faculty and, in some cases, their students, authored 24 such abstracts.

Stargazers



More than 450 people attended planetarium and telescope shows open to the public at TU's planetarium in Smith Hall last year. Celestial navigation, Mars and the shape of the universe

were among the topics presented by TU faculty and visiting lecturers at the monthly shows. Look for announcements of future shows, departmental seminars and other notes on the department Web site: wwwnew.towson.edu/physics.

The screenshot shows the website's layout with a blue header and a white main content area. The 'Announcements' section is highlighted with a blue background and contains several bullet points. The 'Helpful Links' section is also highlighted with a blue background and contains several links. The page also features a search bar and a navigation bar at the top.

Alumni of the Department of Physics, Astronomy and Geosciences

Class of 1929

Haugh, Donald (Natural Science)

Class of 1949

Gwyn, June (Natural Science)

Class of 1959

Miles, William (Natural Science)



State-of-the-art equipment, 1960

Class of 1960

Dean, Norman (Natural Science)

Class of 1962

Gerstmyer, Tim (Natural Science)
Henry, Erma (Kleylein) (Natural Science)
Patrick, Charles (Natural Science)

Class of 1963

Carl, Richard (Natural Science)

Class of 1965

Cook, Elmer (Natural Science)

Class of 1968

Quaskey, Henry (Natural Science)

Class of 1969

Layton, James H. (Natural Science)

Class of 1970

Coats, Walter (Natural Science)
Hatch, Kenneth (Natural Science)
Jung, Stewart Paul (Natural Science)
Moorefield, Robert (Natural Science)
Spangler, Robert W. (Physics)

Class of 1971

Bresh, Douglas (Physics)
Dunkerton, William (Natural Science)
Hardy, Barbara (Young) (Natural Science)
Petrick, Mark (Natural Science)
Sargent, Jr., Louis (Physics)
Schafer, Albert William (Physics)

Class of 1972

Benton, George (Physics)
Budesheim, Gary W. (Physics)
Helinski, Albert L. (Physics)
Kight, Robert (Natural Science)
Mullen, Marvin (Natural Science)
Musacchio, Vincent (Natural Science)
Schorr, Theodore M. (Physics)
Sullivan, Mary (Natural Science)

Class of 1973

Houck, Dale (Natural Science)
Kennedy, Donald (Natural Science)
Knight, J. Franklin (Natural Science)
McCoy, W. Donald (Natural Science)
Meyers, Bertram Craig (Physics)
Milarcik, James (Physics)
O'Brien, Thomas P. (Physics)
Schaeckel, Thomas P. (Natural Science)
Wennberg, Carl R. (Natural Science)

Class of 1974

Crilley, Michael (Natural Science)
Fortkiewicz, Richard (Physics)
Hendrix, Thomas E. (Physics)
Hoffmaster, John E. (Physics)
Lamastia, Michael (Physics)
Raspet, Ronald A. (Natural Science)

Class of 1975

Davis, John G. (Natural Science)
Farrell, III, William James (Physics)
Hughes, Michael M. (Natural Science)
Jaworski, Roland (Physics)
Rill, Wayne L. (Natural Science)
Rudacille, Vivian Louise (Natural Science)
Schoeberlein, Howard C. (Physics)

Class of 1976

Blattner, Larry M. (Natural Science)
Davis, Peter S. (Natural Science)
Fisher, Michael J. (Physics)
Flickinger, William (Physics)
Groeninger, Patricia Iafola (Physics)
Herman, Harriet E. (Natural Science)
Mangieri, Michael J. (Physics)
Meinster, Patricia (Cowan) (Natural Science)
Perrott, David A. (Natural Science)
Rosenberg, Edwin (Physics)
Schick, Vikki A. (Natural Science)



Senior class project, 1989



Gravity-defying hair, 1976

Class of 1977

Gill, Valarie J. (Natural Science)
Hoiland, Arthur M. (Natural Science)
Moore, Bruce C. (Natural Science)
Moore, Doldon W. (Natural Science)
Scherr, Jo M. (Natural Science)
Snyder, Diane (Juras) (Natural Science)

Class of 1978

Brown, Susan (Pearce) (Natural Science)
Doline, Michael P. (Natural Science)
Grill, Robert W. (Natural Science)
Hamilton, III, William R. (Physics)
Jenkins, Gregory R. (Physics)
Johnston, Barry L. (Natural Science)
Kircher, Mary Beth (Duke) (Natural Science)
Kozycki, Allen W. (Physics)
Mulherin, Mark H. (Natural Science)
Norris, Norma (Hoffman) (Natural Science)
Raglin, Ronald (Natural Science)
Sutherland, James (Physics)

Class of 1979

Ashburn, Carlyle (Physics)
Berry, Donald (Physics)
Ernst, Thomas H. (Natural Science)
Gordon, Kerry L. (Natural Science)
Gronert, Thomas A. (Natural Science)
Hastings, Stephen (Physics)
Kuhn, Bernard J. (Natural Science)
Locke, William L. (Natural Science)
Niemann, Victoria E. (Natural Science)
Oreschnick, Richard (Physics)
Poffenberger, Ned (Physics)
Requard, Keith (Physics)
Siegforth, Michael J. (Natural Science)
Swann, Wayne E. (Natural Science)
Trombetta, James (Physics)
Warwick, Dennis C. (Natural Science)
Weiss, Edward F. (Physics)
Zarek, John F. (Physics)
Zukor, John Edward (Natural Science)

Class of 1980

Brown, Dennis (Physics)
Cookson, Duane (Physics)
Gold, Carl E. (Natural Science)
Greene, Deborah (Eads) (Natural Science)
Griffiths, Thomas R. (Natural Science)

Ludwig, John J. (Physics)
 Malat, Jeffrey B. (Natural Science)
 Marotta, Ronald J. (Natural Science)
 Oestreicher, Heidi E. (Natural Science)
 Pirie, Allan F. (Physics)
 Smithson, Charles F. (Natural Science)
 Squires, Michael E. (Natural Science)
 Sushko, Sandra (Mical) (Natural Science)
 Zarzecki, Christopher (Natural Science)



Studying the stars, 1969

Class of 1981

Baker, Robert L. (Natural Science)
 Bartholomey, Edward M. (Natural Science)
 DeSha, Michael S. (Physics)
 Ensor, Mark A. (Physics)
 Knight, David Ray (Physics)
 Loane, Charles M. (Natural Science)
 Oshman, Michele T. (Natural Science)
 Preziosi, Stephen (Physics)
 Pugh, Kenneth R. (Physics)
 Pullen, Debora A. (Natural Science)
 Rynes, Mark S. (Physics)
 Schmitz, JoAnne (Physics)
 Storm, Mark (Physics)
 Wild, Jeanette Adams (Physics)

Class of 1982

Huppenthal, Sheri (Edmanson)
 (Natural Science)
 Johnson, Philip C. (Physics)
 Klingler, David J. (Natural Science)
 Snyder, Theresa (Simpson) (Natural Science)

Class of 1983

Bardzik, Janet M. (Natural Science)
 Brown, James D. (Natural Science)
 Burley, Lew J. (Natural Science)
 Cosby, Otis (Natural Science)
 Fisher, Donald L. (Physics)
 Hemmick, Thomas K. (Physics)
 Herold, George M. (Natural Science)
 Hobner, John H. (Natural Science)
 Lacher, Vernon R. (Natural Science)
 Malapit, John E. (Natural Science)
 Mocko, Paul E. (Natural Science)
 Nicklas, Heather L. (Natural Science)
 Stockman, Stephanie A. (Natural Science)
 Vogel, John (Physics)

Class of 1984

Abel, Gary (Physics)
 Donnell, Theodore L.
 (Natural Science)
 Edmonston, Mark A. (Physics)
 Heckert, William B. (Natural Science)
 Hejl, Jr., Joseph M. (Physics)
 Kang, Ki Hyuk (Physics)
 Lee, Joseph (Physics)
 Morgan, Jr., Ralph (Physics)
 Polak, Helen Goodman (Physics)
 Schwartzman, John (Physics)
 Smith, Thomas K. (Physics)
 Trost, Alan (Physics)

Class of 1985

Cecchini, Charles I. (Natural Science)
 Coffey, Garry (Physics)
 Colburn, Joseph (Physics)
 Della Coletta, Aldo (Physics)
 Douglas, Richard C. (Physics)
 Finegan, Michael K. (Physics)
 Froehlich, Kurt L. (Physics)
 Gillette, Lynn M. (Physics)
 Huels, Michael A. (Physics)
 Kean Jr., Robert C. (Physics)
 Roberts, Dwight T. (Physics)
 Stanka, Michael (Physics)
 Styslinger, Dan (Natural Science)
 Sweetman, David E. (Physics)
 Taormino, Chris (Physics)

Class of 1986

Certeza, Paul (Physics)
 Chojnacki, John R. (Physics)
 Connor, Philip (Physics)
 Crisco, John D. (Physics)
 Downes, Philip (Physics)
 Gonzalez, Roberto (Physics)
 Griffin, Jr., John T. (Physics)
 Hemmick, Douglas L. (Physics)
 Hettchen, Gary (Physics)
 Ingham, Holly O'Neill (Physics)
 Kauffman, Stephen (Physics)
 Lind, Charles A. (Physics)
 Littlefield, Karin (Witz) (Natural Science)
 Nimmo, James (Physics)
 Schaefer, David (Physics)
 Sheats, Richard (Physics)
 Smith, Stephen (Physics)
 Watto, Lori (Physics)

Class of 1987

Culbertson, Ray (Physics)
 Deardorff, D. A. (Natural Science)
 Ford, Amanda Mary (Physics)
 Ford, George A. (Natural Science)
 Greene, Gretchen Beal (Physics)
 Kleeman, Catherine R. (Natural Science)
 McDermott, Louis (Physics)
 Rasinski, Timothy (Physics)
 Sullivan, Dwight Murray (Physics)
 Wecht, Kristen (Physics)
 Wise, Michael (Physics)
 Zehner, David William (Physics)

Class of 1988

Bacinski, John (Natural Science)
 Cicero, Denise (Natural Science)
 Fielding, Lynn L. (Natural Science)
 Fisher, Marie (Natural Science)
 Greene, Charles A. (Physics)
 Hand, Matthew J. (Physics)
 Majedi, Brenda (Feit) (Natural Science)
 Meusel, Leonard (Natural Science)
 Miliner, Rebecca (Natural Science)
 Mooney, Gregory T. (Physics)
 Nass, Charles (Physics)
 Naszkiewicz, Irena (Natural Science)
 Pritchard, Susan C. (Natural Science)
 Richardson, John (Natural Science)
 Stakias, Joanne (Padousis) (Natural Science)
 Townsley, Lois Colleen (Physics)
 Twilley, Michele (Myers) (Natural Science)
 Vaccarino, John Bobby (Physics)

Class of 1989

Al_Najjar, Milad (Physics)
 Chopper, Linda (Nichols) (Natural Science)
 Dunkerton, William (Physics)
 Evans, Jr., Charles (Physics)
 Gutierrez, Diana Marie (Natural Science)
 Halsey, Deanna (Wolfkill) (Natural Science)
 Keller, Thomas (Natural Science)
 Lam, Paulo Yui-Ping (Physics)
 Manger, Thomas (Physics)
 McNamee, Alex P. (Natural Science)
 Meinhardt, Victor Bruce (Physics)
 Morgereth, Edward (Natural Science)
 Pence, John (Natural Science)
 Ruzala, John Joseph (Physics)
 Seely, Jeffrey (Natural Science)
 Stancil, Paul Lynwood (Natural Science)
 Zhang, Wei (Physics)

Class of 1990

Benna, Donna Sorrentino (Physics)
 Bostic, Susanne Logan (Physics)
 Bates, Jr., Harry (Physics)
 Canoles, John Preston (Natural Science)
 Dey, Jonathan (Natural Science)
 Logan, Susanne E. (Physics)
 McAdam, Richard (Physics)
 Metallo, David C. (Natural Science)
 Raley, Bret Frank (Natural Science)
 Rodano, Mark D. (Natural Science)
 Robitaille, Paul (Natural Science)
 Ruble, Edwin (Physics)
 Saunders, Lynne (Natural Science)
 Smith, Jeffrey Bruce (Physics)
 Snyder, Paul Shane (Physics)
 Truscello, John Brian (Physics)
 Werner, Richard Chas (Physics)

Class of 1991

Browning Gerhart, Erin (Physics)
 Deaver, Christopher (Physics)
 DeLeon, William C. (Physics)
 Gompers, Samuel L. (Physics)
 Haslbeck, Laura L. (Natural Science)
 Heuer, Karl L. (Natural Science)
 Hicho, George P. (Natural Science)

Alumni of the Department of Physics, Astronomy and Geosciences

Holthaus, Harry E. (Natural Science)
Lee, Leonard B. (Natural Science)
Ma, Zhaohui (Physics)
Shock, Ronald Glen (Natural Science)
Sparks, Shawn D. (Physics)
Way, Ruth Ann (Natural Science)
Williams, Mark Forest (Natural Science)
Wilson, Jennifer A. (Natural Science)
Ziolkowski, Joseph F. (Natural Science)



Rock field trip, 1974

Class of 1992

Allen-Clark, Brittany (Natural Science)
Anzalone, Michael (Natural Science)
Ball, Jennifer (Natural Science)
Dumler, David A. (Physics)
Elinsky, Stephen (Natural Science)
Finley, Joseph W. (Physics)
Fonseca, Thomas Ian (Physics)
Guelta, Mark (Natural Science)
Graham, Eric (Physics)
Grieb, Ronald S. (Physics)
Hare, Deborah (Natural Science)
Hartman, Linda (Dawson) (Natural Science)
Hunke, Jennifer L. (Natural Science)
Jacobsen, Sharon (Natural Science)
Jones, Jeffrey A. (Physics)
Knubel, Janet M. (Natural Science)
McGowan, Peter C. (Natural Science)
Mesfioui, Abdelhay (Physics)
Mitchell, Robert J. (Natural Science)
Morgan, David L. (Physics)
Moscato, Patrick (Physics)
Newberg, Honore (Natural Science)
Robles, David Clinton (Physics)
Rodriguez, Diane P. (Physics)
Stewart, Michael P. (Physics)
Schwartz, Paul Edwards (Natural Science)

Class of 1993

Beck, Charles Patrick (Natural Science)
Briggs, David (Physics)
Berndt, Tobias (Physics)
Castle, Michael (Physics)
Cox, Kevin (Physics)
Diehl, Dana (Kolb) (Natural Science)
Duckett, Terry (Natural Science)
Engel, Phyllis K. (Natural Science)
Feldmann, John F. (Natural Science)
Fisher, Ruth Kathleen (Physics)
Gillich, Michael J. (Physics)

Heckrotte, Melinda (Francis)
(Natural Science)
Huber, Christine A. (Natural Science)
Johnson, Francesca M. (Natural Science)
Kealy, Paulette B. (Natural Science)
Kehs, Gary Warren (Natural Science)
Langmead, Christopher (Physics)
Mann, Melissa (Peters) (Natural Science)
Mccusker, Joseph (Natural Science)
Naidu, Karthik (Physics)
Romeo, Giuseppe (Physics)
Wolfrum, Wesley (Natural Science)
Wood, Jr., Rodney L. (Physics)

Class of 1994

Beever, Amanda (Natural Science)
Brouillat, Guillemette (Physics)
Cariaso, Nathaniel (Natural Science)
Conder, Robert M. (Natural Science)
Ditmore, Mark S. (Physics)
Garcia, Gerald (Natural Science)
Gentry, Neal D. (Physics)
Hisle, Catherine (Natural Science)
Hopp, Paul L. (Physics)
Huang, Pokai (Physics)
Isom, Clarence (Natural Science)
Killebrew, Justin (Physics)
Lowe, James P. (Physics)
Niles, Steven (Physics)
Noce, Guy (Physics)
Patel, Sandeep K. (Physics)
Reichardt, Peter (Natural Science)
Scopel, Gregory (Physics)
Simmons, Michael A. (Physics)
Skinner, David L. (Natural Science)
Sladek, Michael E. (Physics)
Turrall, Blair C. (Natural Science)
Walstrum, John (Physics)
Wissman, David F. (Physics)

Class of 1995

Billingslea, Willie (Physics)
Bralich, Ryan A. (Natural Science)
Chew, Brian A. (Natural Science)
Choper, Leah (Natural Science)
Edelenbos, Albert (Natural Science)
Erbe, Matthew W. (Natural Science)
Faust, Jonah (Physics)
Felts, Russell (Physics)
Fisher, Richard B. (Natural Science)
Geppi, Dana J. (Natural Science)
Gillich, Christopher (Physics)
Gleisner, Gale P. (Natural Science)
Jachelski, Melissa L. (Natural Science)
Kilby, W. Bradley (Natural Science)
Lombardi, Christopher P. (Natural Science)
Marousek, Michael (Natural Science)
McEachern, Rayford F. (Natural Science)
Mccord, Wade Thomas (Natural Science)
McNaught, Douglas (Physics)
Poorman, James E. (Natural Science)
Rachinskaya, Yana (Natural Science)
Reed, Philip Matthew (Natural Science)
Schaefer, John R. (Natural Science)
Serio, Mark Robert (Natural Science)

Slatnick, Steve M. (Natural Science)
Smith, Ralphael B. (Natural Science)
Strader, Douglas A. (Natural Science)
Welzant, Steve M. (Natural Science)
Williams, D'Ann Laraine (Natural Science)
Wolfe, David (Physics)

Class of 1996

Beauregard, Sheryl (Natural Science)
Brown, Ernest (Natural Science)
Burdette, Richard E. (Physics)
Daley, William (Natural Science)
Ford, Jonathan G. (Natural Science)
Hegberg, Charles (Natural Science)
Henderson, Kimberly (Natural Science)
Hilliard, Amy (Natural Science)
Hinds, Kimberly (Natural Science)
Hopkins, Wayne G. (Natural Science)
Horner, Jacob J. (Natural Science)
Houghton, Gabriel (Natural Science)
Joyce, Christine (Goldman)
(Natural Science)
Kelly, Brian K. (Natural Science)
Kelly, Regina C. (Natural Science)
Kenny, Daniel J. (Physics)
Kilczewski, Steven M. (Natural Science)
Larosa, Gregory M. (Natural Science)
Lowther, Georgina (Young)
(Natural Science)
Mack, Saron (Natural Science)
Mills, Jason (Natural Science)
Moller, Steven M. (Physics)
Moore, David T. (Natural Science)
Morris, Charles (Natural Science)
Pfeiffer, Joseph (Natural Science)
Richmond, James W. (Natural Science)
Schlough, Werner D. (Natural Science)
Schuman, Shawn K. (Natural Science)
Schwenke, Erik (Natural Science)
Singleton, John (Physics)
Thornburg, Jeffrey (Natural Science)
Ulrich, Wyatt (Natural Science)
West, Darin J. (Natural Science)
Williams, Danielle (Mazur) (Natural Science)

Class of 1997

Ambridge, Stanley M. (Natural Science)
Bolling, Lawrence (Natural Science)
Ciampaglio, Charles (Physics)
Farrell, Jr., William James (Physics)
Flynn, Daniel L. (Natural Science)
Fox, Charles (Natural Science)
Gick, Brian K. (Physics)
Keneally, Sean (Natural Science)
Landerman, Laura (Kerr) (Natural Science)
Landis, Patrick (Natural Science)
Lane, Heather C. (Natural Science)
Lewis, Jeannie (Natural Science)
Lohr, Kenneth (Physics)
Markovic, Tomislav (Physics)
Mcghay, Christopher (Natural Science)
Moore, Nathan (Natural Science)
Mrynca, Gary (Natural Science)
Roseman, David Todd (Natural Science)
Stehr, April (Natural Science)
Wood, Jennifer (Bowser) (Natural Science)

Class of 1998

Allred, Michael (Natural Science)
Anderson, Phillip (Natural Science)
Battistone, Gregory (Physics)
Campbell, Robert (Natural Science)
Cezar, John (Natural Science)
Justis, Jack Homer (Physics)
Kim-Quijano, Jessica (Physics)
Klein, Milana Kargman (Natural Science)
Schnirel, Erin (Poling) (Natural Science)



Testing the laws of physics, 1994

Class of 1999

Brickley, Lisa (Pollack) (Natural Science)
Bussard, Michael (Physics)
Findley, William P. (Natural Science)
Flynn, Kelly (Natural Science)
Fowler, Kim (Natural Science)

Gregory, Eric M. (Physics)
Heefner, Kristofer (Physics)
Hoyer, Emma (Natural Science)
Kfoury, Anna-lisa (Natural Science)
Mancini, Nicole (Natural Science)
Millspaw, Jacob P. (Physics)
Murphy, Linda (Natural Science)
Wilmot, David (Physics)
Yantorno, Jennifer (Physics)
Zavala, Sasha (Natural Science)

Class of 2000

Bhatt, Bhuvanesh (Physics)
Cox, David (Chris) (Physics)
Dobbs, Sean (Physics)
Horn, Christina N. (Physics)
Hughes, Adrian (Natural Science)
Kopera, Joseph (Natural Science)
Lipka, Thomas (Natural Science)
Maraj, Priya (Geoscience)
Nazemi, Jonathan (Physics)
Reames, Matthew (Physics)
Srnc, John (Natural Science)
Smith, Jeanne (Natural Science)
Stewart, Bradley (Geoscience)

Class of 2001

Dean, Robert (Geology)
Domzalski, David (Physics)
Kirby, Brian J. (Natural Science)
Meyerdirk, Richard (Geoscience)
Norton, Melissa K. (Physics)
Passerini, Nicholas (Physics)

Petrilli, Janet Leslie (Natural Science)
Reed, Maria D. (Natural Science)
Robinson, Joshua (Physics)
Sato, Mari (Sato) (Geoscience)
Schenk, Michael (Natural Science)
Zellinger, Andrew (Geology)

Class of 2002

Barrow, Shaun (Geology)
Bright, Justin (Physics)
Custer, Justin (Geology)
Hetzel, Patrick (Geology)
Krahling, Jeffrey (Physics)
Martin, Jason (Physics)
Robinson, Jeremy (Physics)
Rosenberg, Amy (Geology)
Weygant, Kristopher John (Physics)

Class of 2003

Burkley, John (Geology)
Corrie, Stacey (Geology)
Delaney, Kevin B. (Physics)
Gatton, Kathryn (Geology)
Harlackner, Tiffany (Earth Space)
Makhoul, Khaldoun (Physics)
Morton, Patrick (Geology)
Saul, Julia (Earth Space)

Class of 2004

Barboza, Karen (Earth Space)
Cook, Cassandra (Geology)
McCubbin, Francis (Geology)

Send Us Your News

“What are others doing now?” That’s the most recurring question alumni ask when sending information on their own post-Towson lives. Our goal is to include information in future newsletters about each graduate listed here. To do this we need your help! Please send news about your personal and professional life to Newsletter Editor, Department of Physics, Astronomy and Geosciences, Towson University, 8000 York Rd., Towson, MD 21252-0001.

Name _____

Class Year _____ Major _____ Name at Graduation _____

Address _____

City _____ State _____ ZIP _____

Home Phone _____ Business Phone _____

Business Address _____

Employer _____

Title _____ E-mail _____

Here’s my news: _____

The Parting Shot...



Pictured left to right: Bill Mechling (Biology), David Larkin (Chemistry), John Newman (Physics) and Mary Lu Larsen (Physics) enjoy a lighter moment.

*"Neutrinos have mass???? ...
I didn't even know they
were Catholic!"*

DP1104.050

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Astronomy and Geosciences

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